

# Wild Times

A Free Publication of the Wyoming Game & Fish Department

Fall 2006

## THE HABITAT CONNECTION: THE AQUATIC ATMOSPHERE

**W**hat is habitat? Habitat is the food, water, shelter and space wildlife need to survive in the wild. Essentially, habitat is home. For fish, their habitat is called aquatic. Aquatic means water, and fish live in water. Streams, rivers, lakes and reservoirs provide the food, water, shelter and space fish need to survive.

Did you know that different fish need different temperatures of water to survive? The best water for fish depends on what kind of fish you are. If you are a cutthroat trout, you like your habitat to be a cold, clean, shady stream with grass and willow bushes growing along the banks. Having clean, cool water with lots of insects for cutthroats to eat is critical for their habitat.



The Little Big Horn outside of Sheridan is good cutthroat habitat.

Janez Milek



Doug Milek

Colorado River cutthroat trout like cold, clear streams.

Channel catfish



LuRay Parker

But unlike the cutthroat trout that likes cold water, the channel catfish lives in warm water. Channel catfish are most common in large reservoirs and big rivers, like Glendo Reservoir and the North Platte River. The catfish prefers slow to moderate current, and deep water with sand, gravel or rubble bottoms.



Janez Milek

Catfish eat almost anything! I seen one eat a rockin' chair one time. When they are smaller fish, they eat aquatic insects, just like the cutthroat trout does. But, bigger catfish actually eat other fish!

Channel catfish use their antenna like feelers to find their food and where they are going.

What habitat do you think walleye live in?



LuRay Parker

Large rivers, like the North Platte are a good place to find catfish.

# FIELD Wildlife Journal

## Bill Wengert, Fisheries Biologist

Bill Wengert is a fisheries biologist with the Wyoming Game and Fish Department. Part of his job is to take care of the Colorado River cutthroat trout. Wyoming Game and Fish biologists are concerned about the Colorado River cutthroat trout. That is because their numbers are going down. But biologists, like Bill Wengert, are working hard to increase cutthroat trout numbers by reintroducing them, or putting them back in the water they once lived. Biologists are making their habitat healthy to live in.

The place Biologist Wengert works the hardest on the cutthroat is in the Sierra Madre Mountain Range. Can you find the Sierra Madres on a Wyoming map? Biologist Wengert says, "the Sierra Madres have many streams that

Colorado River cutthroat trout once lived in, and we are returning the fish to these streams."

The Colorado River cutthroat trout are species of concern. That means it is a fish that we need to take care of so nothing happens to them and they don't become extinct.



Colorado River cutthroat trout

"We have made a big difference in the number of cutthroat trout in Wyoming with the work we have done in the Sierra Madres. We now have streams that are pure cutthroat trout."

This is important for the cutthroat trout because if there are other fish in these streams, particularly brook trout, then the cutthroat trout don't do as well. This is because the brook trout can out-compete the cutthroat for food and hiding places. The brook trout even eat the young fish of the cutthroat. So, the Wyoming Game and Fish Department is putting the Colorado River cutthroat trout in some streams and all the other fish in other streams. If we don't

take care of our Colorado River cutthroat trout then they might get listed as endangered.

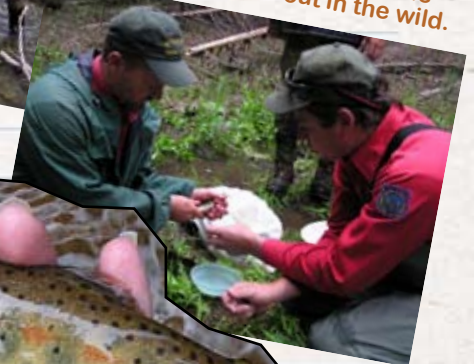
**CLEAN UP  
CUTOUT**

Biologist Wengert uses dye in the Sierra Madres to figure out how fast the stream is flowing.



Biologists work with the cutthroat trout in the wild.

Sampling streams for Colorado River cutthroat trout.



**CLEAN UP  
CUTOUT  
USE OUTER  
GLOW**



A Colorado River cutthroat trout caught by a fisherman.

# WILDLIFE PROFILES



# WILDLIFE PROFILES

## Burbot

**Size:** burbot can weigh up to 24 pounds or more!

**Eats:** in the summer they eat other fish, but during the winter they feed on aquatic insects.

**Lives:** In Wyoming the Burbot is native to the Big Horn and Tongue river drainages.

Burbot are also called ling. They are a fish that likes cold, deep lakes and large rivers. They have a long, slender body that almost makes them look like an eel! The population of burbot is decreasing in Wyoming because the silt or sediment from erosion. You can fish for them in Boysen Reservoir and Ocean Lake, especially during the winter fishing season. Ice fishermen like to fish for burbot.

## Common Stonefly

**Size:** up to four inches long.

**Eat:** algae, tiny water animals, and other insects.

**Lives:** in and around ponds, lakes and streams.

Stoneflies live mainly in flowing water like streams and rivers. Did you know stoneflies have gills like a fish? They use these gills to breathe the oxygen that has been dissolved in the water. Their young insects are called nymphs or larvae, and they don't have wings. When they are ready to become adults, nymphs or larvae leave the water and shed their skins. The adults have wings and look completely different than the young. The adult stoneflies even live on land.

## Crayfish

**Size:** they range from half an inch to six inches.

**Eats:** crayfish are omnivores meaning they eat just about everything from aquatic vegetation, to snails, to fish eggs.

**Lives:** like fish, crayfish breathe by using gills.

Crayfish have a hard covering over their outer body that is used to protect them from predators. They have five pairs of legs. The first three pairs of legs have hinged claws, but the first pair has large pincers used for holding and tearing food. If you are catching crayfish, watch out for your fingers! Even though their hard outer shell protects them, crayfish are an important food of fishes, reptiles and other carnivores. Although you might have seen them moving around during the day, the crayfish is nocturnal and moves and feeds mainly at night under the protection of darkness. If crayfish are disturbed they swim backwards quickly, darting away from danger.

## Caddisfly

**Size:** depending on the caddisfly, they can range from half an inch to one and a half inches.

**Eats:** aquatic vegetation, decaying materials, other insects.

**Lives:** You can find caddisflies in almost all types of water, but most are found in cool streams compared to large, warm rivers. Don't forget to check for them in ponds and lakes.

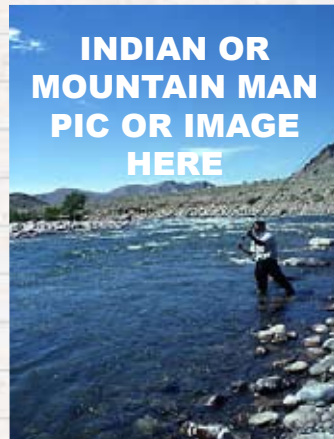
The caddisfly is a unique aquatic insect because it carries its home with it wherever it goes. Do you think you could carry your home with you? They use grasses, sticks, and rocks to build a protective layer, or case, around its soft body. Did you know a caddisfly can spin a silk thread underwater? They use this silk thread for many things, like moving around, holding tight on one place, catching food, just to name a few uses. Some caddisflies have gills that they use to breathe underwater, but most caddisflies have very thin skin. They can actually breathe through their skin! Can you think of an amphibian we have in Wyoming that also breathes through its skin?

# OUR Wildlife Heritage

## Wyoming Natives

By Dave Rippe

Several kinds of trout live in Wyoming waters. In our state, cutthroat trout are also called native trout because they are true Wyoming natives. They were not brought to Wyoming from somewhere else, as were the rainbow trout and other kinds of trout. Cutthroats were the trout the Indians, mountain men and pioneers caught back in Wyoming's early days. Wyoming still has four different kinds of cutthroat trout. It used to have even more, but some of them have disappeared.



## Historic Names

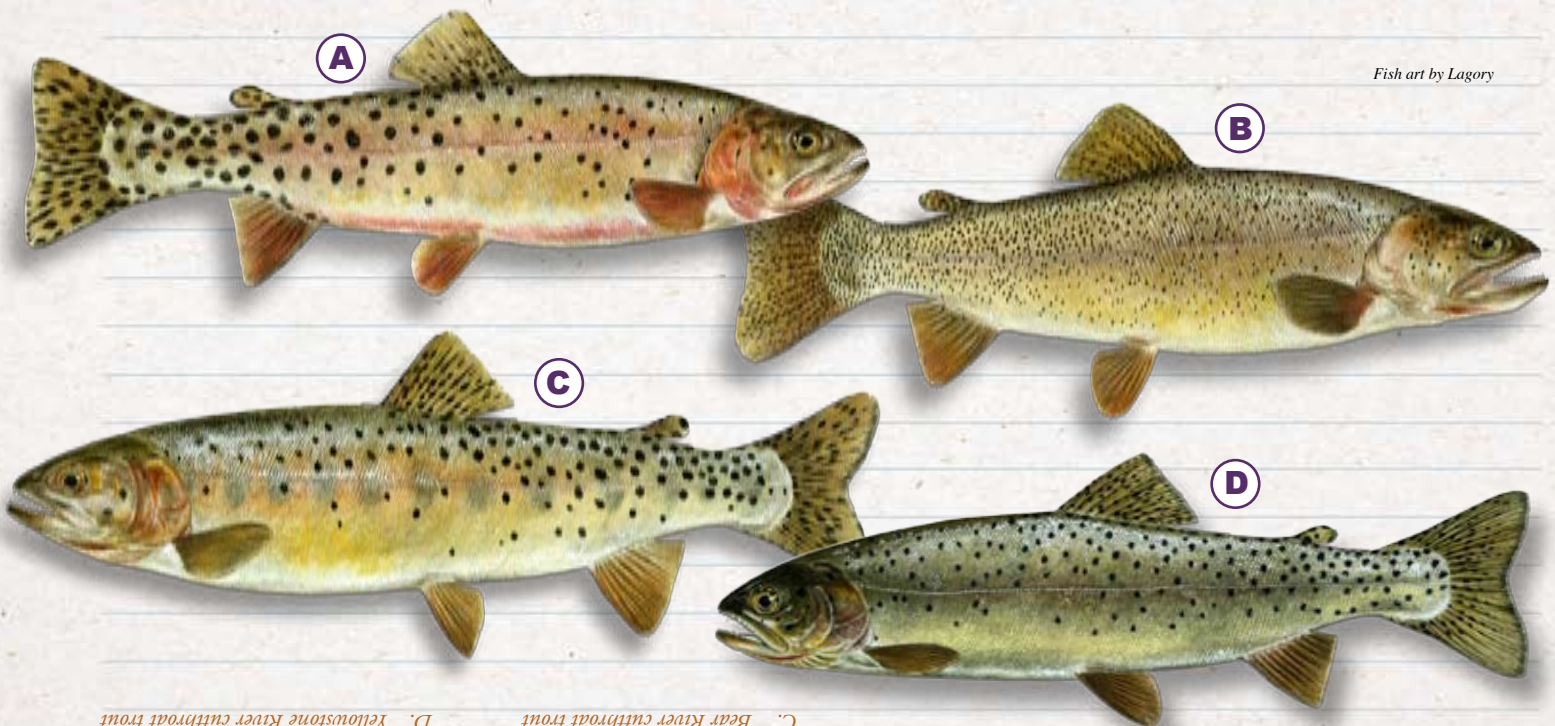
By Dave Rippe

Scientists have special names for wildlife. The names are in the Latin and Greek languages. Many of them are long and hard to spell. Scientists have given the cutthroat trout the name *Oncorhynchus clarki*. The first word *Oncorhynchus*, means "hook-shaped nose," and the second word, *clarki*, refers to a famous explorer named William Clark. When you study history, you will learn about him. Early in the 1800s, Lewis and Clark explored the mountains and rivers of western North America where cutthroat trout live. That's why the cutthroat was named after Clark. A river in northwest Wyoming also bears his name, the Clarks Fork. Can you find it on a Wyoming map?



An angler on the Clarks Fork.

## Can you identify the four different cutthroat trout?



Fish art by Lagory

- A. Colorado River cutthroat trout  
B. Snake River Finespot cutthroat trout  
C. Bear River cutthroat trout  
D. Yellowstone River cutthroat trout

# Around Wyoming

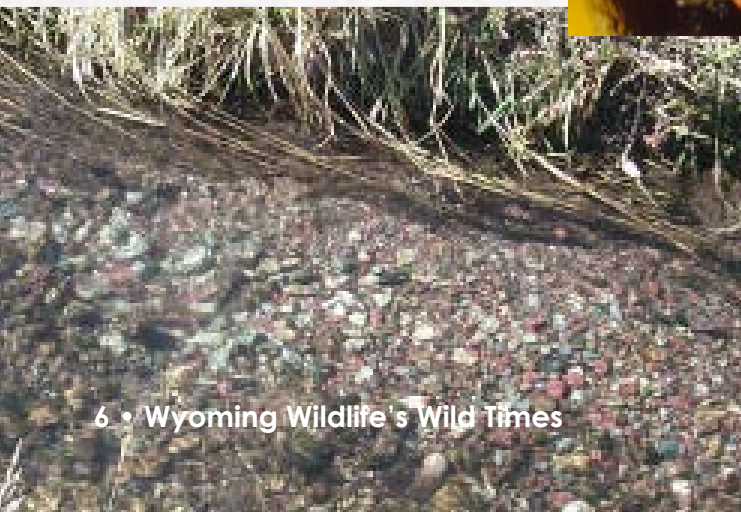
## The Trout Life Cycle

Have you ever seen minnows swimming near the edge of a stream or pond? Did you ever wonder what kind they were? Well fish develop in the wild in a number of stages called the fish life cycle. What you might be seeing aren't minnows at all, just young trout beginning their journey to adulthood!

The life cycle of a trout begins when the female fish lays her eggs in a stream or river with a gravel bottom. The female digs a small nest, called a redd, and lays her eggs. The male then comes and fertilizes the eggs. Although trout do not guard their eggs once they have been laid, the female will cover them with a small amount of gravel for protection. Depending on the species of trout eggs, they will incubate from three to five months.

After around 20 days, the fertilized eggs show dark spots. These are the fish's eyespots, so the eggs are called eyed eggs. These eggs begin to develop in the gravel and then hatch into sac fry.

**Fish lay their eggs in gravel called redds.**



Sac fry are sensitive to light and generally stay in the gravel. They get their food from the yolk sac attached to their bellies. The yolk sac usually last from 10 to 20 days and helps the fish grow bigger.



**Sac fry**

**Eyed eggs**



After several weeks, the fish emerge as fry. Fry are the tiny fish after the yolk sac has been used up. They will then swim to the surface to look for food.

Once they get bigger, young trout are know as fingerlings. Most of the fish the Wyoming Game and Fish Department stocks are at the fingerling stage.

In the wild, if a female trout lays 4,000 eggs, only around 40 will live to be one year old. This is because they have lots of predators to face. Can you think of predators that might feed on small fish?



**Fingerlings**

Those who do live to be adult trout will then lay their eggs in the gravel and the cycle will start all over again.

If you would like to see the different stages of a trout life cycle, visit a fish hatchery! The Wyoming Game and Fish Department has ten hatcheries around the state.



**Fish are stocked all over Wyoming.**



**Visit a Wyoming Game & Fish Department fish hatchery near you!**

# Outdoor Classroom

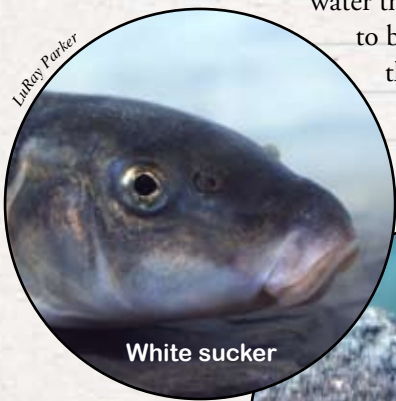
## Aquatic Adaptations

Do you know what kind of adaptations a fish has that allows it to live underwater? Adaptations are features of an animal that all it to survive in its habitat. For example, gills allow fish to live underwater. What do gills do? Gills take the oxygen out of the water that fish need to breathe out of the water. As humans, can we breathe underwater?

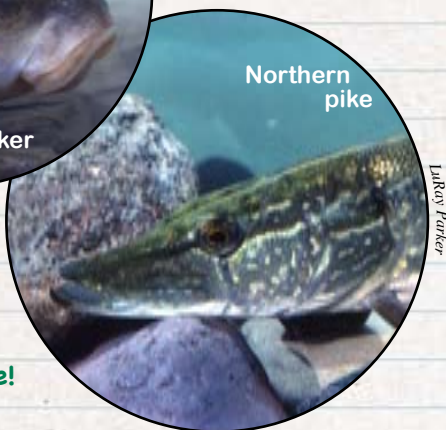


Look at the pictures of the fish and think about what they look like, what they eat, where they live and see if you can come up with adaptations they might have that makes living underwater easier.

Do you think the slender, smooth bodies of the channel catfish and the brown trout help it swim fast underwater?



Check out the mouth parts on the white sucker and northern pike!



Can you see the bluegill or the golden shiner? Their color helps them hide in their habitat.

## Where do the insects live?

Have you ever waded through a stream or played in the water and thought about what lives there? We can picture the fish hiding under the stream banks or deep holes, but have you ever looked for aquatic insects? Try this with your class, but be sure to use safety precautions when you are around water!

1. Find a stream, river or lake close to your school that you can take a field trip to.
2. Take a net or an old window screen and put it in the water...have someone stand up stream and kit the bottom of the stream.
3. Turn over some rocks and then pull out the net...what do you see?

If you see lots of things crawling around they are aquatic insects that make great food for fish! Some day these insects will hatch and then live on the land.



# ► TEST YOUR KNOWLEDGE ◀

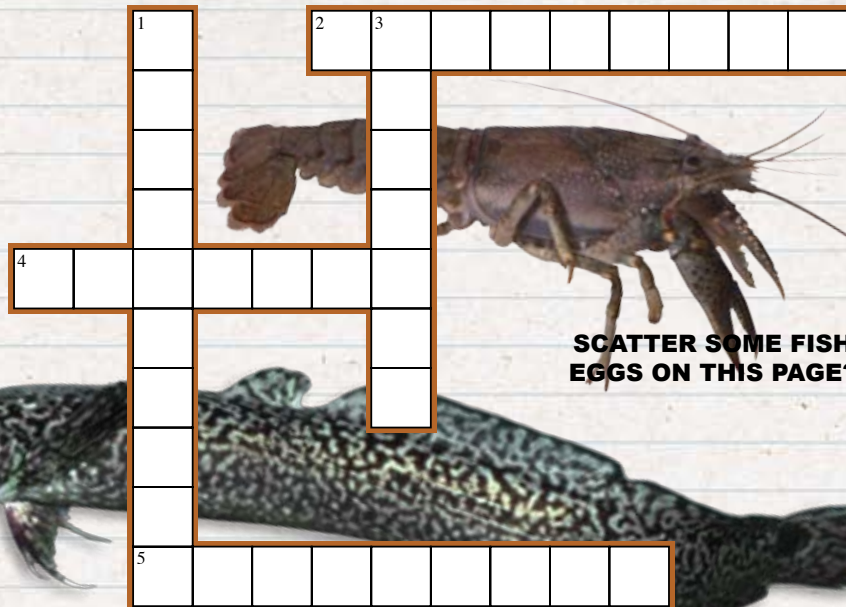
## Crossword Puzzle

### ACROSS

2. An animal that only eats meat is a ...
4. A plant or animal species that doesn't exist anymore is said to be ...
5. Animals that are active at night are ...

### DOWN

1. A special feature of a plant or animal that helps it survive in its habitat is an ...
3. It is the type of habitat fish live in.



**SCATTER SOME FISH EGGS ON THIS PAGE?**

## Quiz

My house is called a lodge and I build it using sticks I cut down with my sharp teeth. When I built my house I put the entrance in a safe place, to get into my house you must enter it from underwater. But if I see you coming I will be sure to warn my family by slapping my tail on the water to make a loud warn noise. Who am I?

Write your answer here: \_\_\_\_\_

Quiz answer: Beaver  
**DOWN**  
 1. Aquatic 3. Aquatic  
**ACROSS**  
 2. Carnivore 4. Extinct 5. Nocturnal

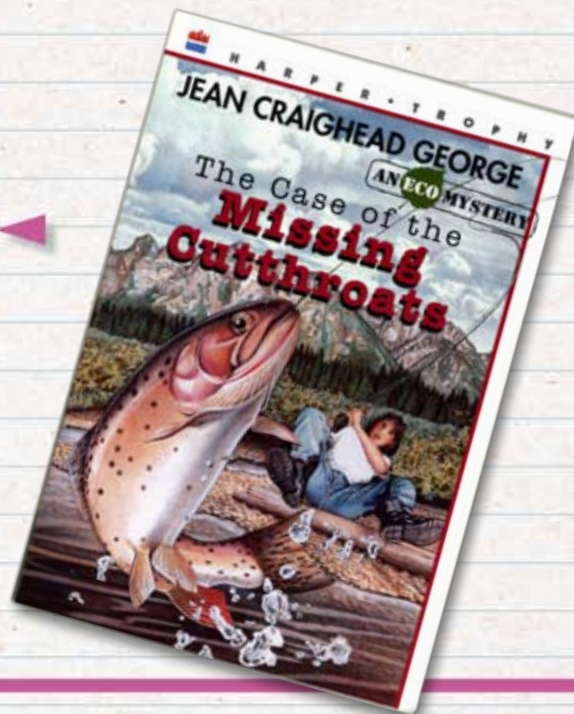
# ► LEARNING LINKS ◀

## Books

### The case of the Missing Cutthroats

by Jean Craighead George

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